

ABSTRACT

A selective hydrogenation catalyst, with alumina as carrier, and palladium as active component that distributed on the surface of the carrier in an egg-shell form, characterized in that: provided that the catalyst is weighed 100%, it comprises 0.2-0.5 wt% active component Pd, 2-8 wt% aids lanthanum and/or cerium, and 2-8 wt% alkaline earth metal. The specific surface area of the catalyst is 70-150 m²/g, the pore volume is 0.3-0.6 ml/g, and the crystal form of the carrier may be θ form or θ , α mixed form mainly composed of θ form. The catalyst is suitable for the selective hydrogenation of medium or low distillate oil, especially for the first stage selective hydrogenation of pyrolysis gasoline. The catalyst has good hydrogenation performance, and can keep good hydrogenation activity and stability especially under the condition that the feed contains a small quantity of water, and the content of colloid, arsenic, and diolefin is higher.



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